

HARD DRIVE TYPES

As you recall, if your system BIOS does not use autodetection, you must tell it what hard drive type you are using when you set up your system. System BIOS provides you with a list of drive types to select from, as well as the option of specifying a user-defined drive type. This appendix lists various hard drive types and their parameters, including the number of tracks, heads, sectors per track, and so on. Nowadays, these drive types are rarely used; today's hard drives are much larger than any on the BIOS drive list, so the user-defined drive type is usually used, which is usually type 47 or 48. Nonetheless, the BIOS of almost every PC continues to offer the same list of "old" drive types, and it is still helpful to understand where the list comes from and what it means.

The first hard drive types were established by IBM, and a list of them was first included in its BIOS for IBM XT 286 computers in 1985. When a hard drive is installed on a PC, setup is told the drive type (or autodetection automatically detects the type) and this information is then written to CMOS. The system BIOS then knows the logical layout and size of the hard drive. As the variety of hard drives increased, the list of drive types grew. IBM later added more types to its list, and Compaq and other manufacturers introduced their own lists. Other companies writing BIOSs also introduced their own lists.

Following are two tables, the first listing drive types from the IBM BIOS list, and the second listing drive types from the Phoenix BIOS list. Other BIOSs may have different hard drive tables. For a listing of the hard drive types supported by your BIOS, see CMOS setup.

Table B-1 IBM hard drive types

Drive Type	Tracks	Heads	Sectors Per Track	Write Precomp	Capacity (MB)
1	306	4	17	128	10
2	615	4	17	300	20
3	615	6	17	300	32
4	940	8	17	512	64
5	940	6	17	512	48
6	615	4	17	None	20
7	462	8	17	256	30
8	733	5	17	None	30
9	900	15	17	110	112
10	820	3	17	None	20
11	855	5	17	None	35
12	855	7	17	None	50
13	306	8	17	128	20
14	733	7	17	None	40
15	Not used				
16	612	4	17	0	20
17	977	5	17	300	40
18	977	7	17	None	56
19	1024	5	17	512	60
20	733	5	17	300	30
21	733	7	17	300	42
22	733	5	17	300	30
23	306	4	17	0	10
24	612	4	17	305	21

Table B-2 Phoenix BIOS drive types

Drive Type	Tracks	Heads	Sectors Per Track	Write Precomp	Capacity (MB)
25	615	4	17	0	20
26	1024	4	17	None	35
27	1024	5	17	None	44
28	1024	8	17	None	70
29	512	8	17	256	35
30	615	2	17	615	10
31	989	5	17	0	42
32	1020	15	17	None	130
33	615	4	26	None	32
34	820	6	26	None	65
35	1024	9	17	1024	80
36	1024	5	17	512	44
37	1024	5	26	512	68
38	823	10	17	256	70
39	615	4	17	128	21
40	615	8	17	128	42
41	917	15	17	None	120
42	1023	15	17	None	132
43	823	10	17	512	71
44	820	6	17	None	42
45	1024	5	17	None	44
46	925	9	17	None	71
47	699	7	17	256	42
48	User-defined				

